

## INTERNATIONAL SEARCH REPORT

National Application No

PCT/IB2004/051368

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 G11B17/028 G11B23/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 320 425 A (HALL ROBERT C) 16 March 1982 (1982-03-16)	1-9, 12,
A	column 2, line 41 - column 6, line 22; figures 1-8	13, 16 10, 11
X	US 4 481 619 A (OOZEKI MIKIO) 6 November 1984 (1984-11-06)	14-16
	column 2, line 67 - column 4, line 52; figures 3, 4	
X	US 4 670 077 A (PEETERS HENDRIKUS W C M) 2 June 1987 (1987-06-02)	1-9, 12,
A	column 7, line 1 - column 10, line 19; figures 1-3	16 10-15
X	US 3 706 085 A (BRAND ABRAHAM ET AL) 12 December 1972 (1972-12-12)	14, 15
	column 3, line 4 - line 18; figure 1	
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

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Date of the actual completion of the international search

18 October 2004

Date of mailing of the international search report

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 757 412 A (IIZUKA MICHIO ET AL) 12 July 1988 (1988-07-12) column 1, line 45 - line 51; figure 1 -----	10,11
X	EP 1 246 185 A (MITSUBISHI ELECTRIC CORP) 2 October 2002 (2002-10-02) column 17, line 19 - column 18, line 54; figures 1-5,85 -----	14

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

national Application No

PCT/IB2004/051368

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4320425	A	16-03-1982	DE FR GB IT JP JP JP	3113958 A1 2480477 A1 2074364 A ,B 1142484 B 1009660 B 1526640 C 56159880 A		14-01-1982 16-10-1981 28-10-1981 08-10-1986 20-02-1989 30-10-1989 09-12-1981
US 4481619	A	06-11-1984	JP DE GB KR	57135478 A 3204780 A1 2093256 A ,B 8501455 B1		21-08-1982 28-10-1982 25-08-1982 05-10-1985
US 4670077	A	02-06-1987	NL DE EP JP JP JP KR US US	8501148 A 3672319 D1 0201117 A1 1972119 C 7001558 B 61292245 A 9410947 B1 4827469 A 4911776 A		17-11-1986 02-08-1990 12-11-1986 27-09-1995 11-01-1995 23-12-1986 19-11-1994 02-05-1989 27-03-1990
US 3706085	A	12-12-1972		NONE		
US 4757412	A	12-07-1988	JP DE GB	61028172 U 3525412 A1 2161978 A ,B		20-02-1986 23-01-1986 22-01-1986
EP 1246185	A	02-10-2002	JP EP DE DE EP US US	9270161 A 1246185 A2 69716790 D1 69716790 T2 0788103 A2 5956207 A 5959804 A		14-10-1997 02-10-2002 12-12-2002 17-07-2003 06-08-1997 21-09-1999 28-09-1999